

IN THE CLAIMS:

1. (original) A home-zone location registering method ~~for~~using a portable radio telephone for a home-zone service that charges to provide at a first charging rate for a telephone call made inside a predetermined home zone and at a second charging rate for a telephone call made outside the home zone, the method comprising the steps of:

receiving, by the portable radio telephone, a home-zone list downloaded from a home location register;

determining, by the portable radio telephone, whether the portable radio telephone deviates from the home zone to make a determination of either deviation or non-deviation from the home zone; and,

responsive to the determination of deviation, informing, by the portable radio telephone, to a mobile switching center of said determination of deviation.

2. (original) The method as claimed in Claim 1, wherein the first charging rate corresponds to a wired telephone call rate and the second charging rate corresponds to a radio telephone call rate.

3. (original) A home-zone location registering method for a mobile switching

center (MSC) to provide a first charging rate for a telephone call made inside a predetermined home zone and a second charging rate for a telephone call made outside the home zone, the method comprising the steps of:

checking whether a location registration request is received from a portable radio telephone;

if the location registration request is received, checking whether the portable radio telephone deviates from the home zone by checking whether the current position of the portable radio telephone is included in a home-zone list;

upon receiving a call origination from the portable radio telephone, releasing the call origination if the portable radio telephone is deviated from the home zone;

disregarding a call termination if the portable radio telephone deviated from the home zone receives the call termination; and,

preventing a paging by the MSC to notify the portable radio telephone that the portable telephone deviated from the home zone.

4. (original) The method as claimed in Claim 3, further comprising the step of informing the portable radio telephone when the call origination or the call termination is released.

5. (original) The method as claimed in Claim 3, further comprising the step of downloading the home-zone list in a memory means of the portable radio telephone.

6. (original) The method as claimed in Claim 3, wherein the first charging rate corresponds to a wired telephone call rate and the second charging rate corresponds to a radio telephone call rate.

7. (original) A home-zone location registering apparatus for a portable radio telephone to provide a first charging rate for a telephone call made inside a predetermined home zone and a second charging rate for a telephone call made outside the home zone, the apparatus comprising:

a memory for storing a home-zone list;

a receiving section for receiving a predetermined signal from a base transceiver station (BTS);

a comparing section for checking whether the portable radio telephone deviates

from the home zone by comparing the predetermined signal from the BTS with the home-zone list stored in the memory;

a location registration message generating section coupled to the comparing section for generating a location registration message to attempt a location registration to the mobile switching center when the BTS information is not included in the home-zone list;

a transmitting section for transmitting the generated location registration message from the location registration message generating section to the BTS.

8. (original) The apparatus as claimed in Claim 7, wherein the signal transmitted from the BTS includes a base transceiver station identification (BTS ID) information.

9. (original) The apparatus as claimed in Claim 7, wherein the BTS ID information is transmitted via a paging channel.

10. (original) The apparatus as claimed in Claim 9, wherein the home-zone list includes a cell identification, a sector identification, and maximum and minimum round trip delay field information, defining the home zone.

11. (original) The apparatus as claimed in Claim 7, wherein the memory comprises a flash memory for storing the home-zone list.

12. (previously presented) A home-zone location registering apparatus for a portable radio telephone to provide a first charging rate for a telephone call made inside a predetermined home zone and a second charging rate for a telephone call made outside the home zone, the apparatus comprising:

a memory for storing a home-zone list;

a receiving section for receiving a predetermined signal from a base transceiver station BTS;

a comparing section for checking whether the portable radio telephone deviates from the home zone by comparing the home-zone list to a sector of a currently tuned base transceiver station from the signal received by the receiving section;

a location registration message generating section for confirming that the portable radio telephone deviates from the home zone if the sector of the BTS identical to the sector of the currently tuned BTS does not exist in the home-zone list and for generating a location registration message to attempt a location registration to the mobile switching

center; and

a transmitting section for transmitting the generated location registration message to the base transceiver station.

13. (original) The apparatus as claimed in Claim 12, wherein the home-zone list includes a cell identification, a sector identification, and maximum and minimum round trip delay field information, defining the home zone.

14. (original) The apparatus as claimed in Claim 12, wherein the memory comprises a flash memory for storing the home-zone list.

15. (original) A home-zone location registering apparatus for a portable radio telephone to provide a first charging rate for a telephone call made inside a predetermined home zone and a second charging rate for a telephone call made outside the home zone, the apparatus comprising:

a memory for storing a home-zone list;

a receiving section for receiving a predetermined signal from a base transceiver station (BTS);

a comparing section for checking whether the portable radio telephone deviates from the home zone by detecting a pseudo noise code of a currently tuned BTS from the signal received by the receiving section and for comparing the detected pseudo noise code with the home-zone list stored in the memory;

a location registration message generating section for confirming that the portable radio telephone deviates from the home zone if the pseudo noise code identical to the detected pseudo noise code does not exist in the home-zone list and for generating a location registration message to attempt a location registration to the mobile switching center; and,

a transmitting section for transmitting the generated location registration message to the base transceiver station.

16. (original) The apparatus as claimed in Claim 15, wherein the home-zone list includes a cell identification, a sector identification, and maximum and minimum round trip delay field information, defining the home zone.

17. (original) The apparatus as claimed in Claim 15, wherein the memory comprises a flash memory for storing the home-zone list.